

April 18, 2007

Winston Hickox Chair, Cal EPA Market Advisory Committee

Lawrence H. Goulder Vice Chair, Cal EPA Market Advisory Committee

Re: Second Set of Comments for Market Advisory Committee

Dear Chairman Hickox, Professor Goulder, and Committee members,

Thank you for the opportunity to offer these comments.

In this letter we offer recommendations with respect to the question that the Market Advisory Committee is addressing: if the Air Resources Board decides to go forward with a cap-and-trade program for California, how should it be designed? We limit our recommendations to three important design features: allocation, offsets, and allowance price caps. Our assessment is that the method for allocating allowances and the limitations to be placed on offsets will be critical decisions amongst the many cap-and-trade design choices. With respect to the method of allocation, we advocate for the auctioning of allowances. With respect to the use of offsets in compliance with emission reductions, we believe that there should be strict limits on these. We also offer our views on the topic of prices caps on allowances, which we oppose.

Of course, other decisions with respect to cap-and-trade design would also be critically important, such as setting the level of the cap within the presumptive cap-and-trade program at a level that achieves significant emission reductions. Prior cap-and-trade programs have a mixed record at best when it comes to choosing a cap level that achieves the necessary environmental benefits. Another important topic on which we hope to provide more specific comments in the future is the means by which local air quality will be effectively protected under a cap and trade system. We continue to work on these and other cap-and-trade design issues, but given the rapidly approaching conclusion of the Market Advisory Committee's

work in June we believe it is important to express our views at this time on the issues of allocation, offsets, and price caps. As the process unfolds, we expect to further develop and refine our positions and we will provide comment on a wider set of cap-and-trade design features.

Before going into more detail with respect to the recommendations that are the focus of this letter, we emphasize a theme from our last set of comments: A well-designed cap-and-trade program could have a useful supplementary role in AB 32 implementation, but sectoral policies are critically important. California has been a leader in developing policy solutions in the areas of transportation and energy, and we urge the continuation of this effort. Such sectoral policies reduce the cost of climate mitigation, because the lack of a price for greenhouse gas emissions is just one of a multitude of market failures that has created global warming. Thus, sectoral policies are one way to ensure that low-cost emission reduction options are fully captured. Moreover, sectoral policies can deliver targeted technology innovations within particular sectors, in a way that a multi-sector cap-and-trade program could never guarantee.

Recommendations

The principal cap-and-trade design recommendations that we present in this letter are:

1. Auction allowances

- There are many reasons that auctioning 100% of allowances would be preferable. At minimum, the great majority of allowances should be auctioned and the percentage auctioned should increase over time. The key principle is that allowances, which will represent newly created wealth with a value that will far exceed adjustment costs, should be used to further the public interest and not to enrich private entities.
- 2. Place strict limits on the use of offsets
 - → Offsets should be limited to a modest fraction of required emission reductions and offsets from outside of California should be excluded.
- 3. Do not include price caps for allowances
 - → No "safety valve" on allowance prices

Below we discuss the reasoning underlying our recommendations.

Auctioning

We favor the auctioning of allowances. However, instances in which economic agents are covered by cost-of-service regulation, as is the case with California's investor-owned utilities, present important differences from competitive markets. In particular, concerns about windfall profits seem much less prominent. We continue to study the implications of auctioning allowances under such circumstances. In the remainder of this section, we point out the many advantages that auctioning has over free allocation.

Auctioning avoids windfall profits

The European experience under cap-and-trade has shown that free allocation leads to windfall profits in competitive markets. Giving away allowances to covered emitters does not protect consumers from price rises in competitive markets. Electric utilities and other covered emitters in Europe have been able to raise prices to consumers to reflect the market value of the allowances, even though they received them for free. The total value of allowances will far exceed the adjustment costs that business may face, and this is why unfair windfall profits result from giving away allowances.

"Economic analysis and experience with Europe's trading system suggests that energy companies can and will pass most program costs through to consumers and businesses at the end of the supply chain. If the same companies get a large allocation of free allowances, the value of those allowances is likely to substantially exceed any actual net costs they incur as a result of the policy."

~ National Commission on Energy Policy

Auctioning provides an efficient source of revenue with many valuable uses Auctioning revenue could be used for:

- Research and development
 - This would contribute to the discovery of innovations that would reduce the cost of global warming solutions and would assist California's burgeoning clean tech industry
- O Deployment of global warming solutions
 - Energy efficiency measures, clean energy incentives, etc.
- Transition assistance
 - Assistance for consumers (to counter regressive economic effects) or disproportionately affected industries
- O Investments in air quality to ensure anti-backsliding provisions are satisfied
- Efforts to address competitiveness concerns
- O Enhancement of economic efficiency via reductions in distortionary taxes or percapita cash transfers to the people of California

Two recent reports have documented and explained the occurrence of windfall profits in the European Union's Emission Trading System. These are:

⁽i) National Commission on Energy Policy, 2007, Allocating Allowances in a Greenhouse Gas Trading System

⁽ii) Deutsche Bank Research, March 2007, EU Emissions Trading: Allocation Battles Intensifying.

Auctioning is much simpler administratively

Auctioning avoids costly regulatory battles over how free allocation will be achieved. Large sums of money are at stake in free allocation, and so industry will devote substantial resources to influencing the outcome, and correspondingly government will have to devote public resources to disentangle competing claims. The European experience has demonstrated this too.

Auctioning creates the right incentive structure and a level playing field

- Auctions reward early action. Those that undertake early action will benefit from being able to purchase fewer allowances than if the early action had not been taken.
- O Auctioning does not disadvantage new entrants who would seek to enter a market.
- O Auctions lead to early and better price discovery, reducing unnecessary volatility in the market.
- O Auctions avoid the perverse outcomes that arise from grandfathering in which firms that pollute the most are rewarded by receiving the most allowances.

Auctioning has an established role in public management of natural resources

Past cap-and-trade programs have not auctioned large shares of required allowances, but the lesson observers of these experiences have drawn is that auctioning should be the primary method for allocation. The Regional Greenhouse Gas Initiative will require each state to auction at minimum 25% of the allowances and all five states that have announced their plans have embraced a 100% auction. In fact, auctioning has a long history of use in public management of natural resources, for example in allocation of mineral, oil, timber, water, and fishery rights. Outside of natural resources, the field of telecommunications offers an interesting example. The Federal Communication Commission started by giving away the entire broadcast spectrum for wireless technologies. Today the FCC auctions 100% of these permits, and the last auction brought in \$13.9 billion dollars. Market manipulation has not been an issue despite a relatively small number of participants.²

Concerns about competitiveness are manageable

Concerns about competitiveness can be managed through the design of the cap-and-trade program itself. For example, the load serving entity approach in the electricity sector gives equal treatment to electricity generated in-state and out-of-state, and such an approach could be extended to other sectors. To the extent that there are residual concerns about competitiveness in other energy-intensive sectors, these can be dealt with through use of a small portion of auction revenues, rather than through wholesale giveaways of allowances.

Kerr, Suzi and Peter Cramton. 1998. *Tradable Carbon Allowance Auctions: How and Why to Auction*, Center for Clean Air Policy Publication – Airlie Carbon Trading Papers (March)

Offsets

Offsets should be limited to a modest fraction of required emission reductions and should be limited to projects implemented in California. To be clear, by offsets we refer to emission reductions obtained from entities not subject to an existing cap-and-trade program, either in California or from outside of the state. To be even considered for inclusion under AB 32 implementation, these emission reductions must be genuine, additional, quantifiable, verifiable, and enforceable by the Air Resources Board.

Offsets are not a substitute for emission reductions in California's high emitting sectors. While the use of offsets can lower compliance costs and allow uncapped sectors or uncapped geographic areas to contribute to the achievement of emissions reductions, offsets can also be a potential loophole to avoid real near-term emissions reductions in high-emitting sectors. Any serious solution for climate change must include real reductions from high-emitting sources in California. If over the next decade, we fail to start making real progress toward our long run objectives of an 80% reduction in emissions compared to 1990 levels by 2050, we will only make achieving that objective more difficult and costly.

Offsets could dampen the incentive for innovation in capped sectors

A large role for offsets could shift the emission reduction effort away from the capped sectors to other sectors or even to areas outside of California, thus dampening the incentive for innovation in sectors of the California economy covered by such a program. The only way that such an innovation-dampening shift of emission reductions would not occur is if the cap is lowered to account for the amount of offsets that are allowed. Put differently, establishment of a more stringent cap to account for offsets is very different than first setting the level of a cap in a cap-and-trade program and then allowing offsets as a means to achieving these. The scope and the level of the cap in whatever cap-and-trade program may be developed have yet to be determined, and so it is possible that the cap in California capand-trade program could be set lower in anticipation of a role for offsets. To continue to explore the innovation theme, theoretically it is possible that offsets could further innovation by providing a way to reward creative emission reductions that would otherwise not be captured. In practice however, the trend in the RGGI model rule and the Kyoto Protocol's Clean Development Mechanism has been to identify a limited set of allowed project types with standardized methodologies; the trend toward a limited set of standardized projects has been motivated by the desire to only allow projects where reliable emission benefit estimates can be made and to reduce transaction costs of project development. This runs counter to the notion of offsets furthering innovation by bringing in novel types of projects.

Offsets from outside California risk the export of co-benefits

Most projects to reduce global warming pollution have important co-benefits, including improved air and water quality. These co-benefits are not easy to value, and are often not included in cost-effectiveness calculations. To ensure that these types of positive co-benefits accrue to California, offsets should be limited to the geographic boundaries of the state.

Criteria for offsets

To put the California economy on an emission reduction path consistent with avoiding dangerous global warming, to maintain a robust incentive for innovation in California industry covered by the cap-and-trade program, and to avoid the export of valuable cobenefits, we propose the following criteria for offsets:

- A small fraction of reductions
 - Offsets must be limited to a modest fraction of required reductions (note that this is a percentage of *required reductions*, not a percentage of *total emissions*)
- O <u>Limited to California</u>
 - Offsets should be limited to projects within California.
- Offsets raise complex analytical questions that will require carefully designed analytical methods and institutions to ensure that claimed environmental benefits meet AB 32's requirement that emission reductions be real, surplus, verifiable, enforceable, and permanent. Third-party verification should have a role; there should be rigorous evaluation and accreditation of these third-party verifiers. The costs of monitoring and verification of offsets should be borne by covered entities using them for compliance with the cap-and-trade regime, not by California taxpayers.
- O <u>Prioritize offsets that deliver substantial co-benefits</u>
 In identifying acceptable types of offset projects, those with substantial co-benefits, especially improved air quality, should be prioritized.
- O Social and environmental screening

 There should be no net environmental or social risks from offset activities. In other words, offsets that reduce carbon emissions but result in other harms to the environment or to society (such as increased emissions of other harmful pollutants) would be disallowed.

Price caps

We oppose the imposition of a cap on the price of allowances.

A price cap would induce unacceptable environmental uncertainty

The specific quantitative targets set forth in AB 32 are at odds with the uncertainty vis-à-vis environmental benefits that a price cap would induce. If the price reached the level of the cap, the state would sell additional allowances not representing actual emissions reductions, thus undercutting the environmental objectives of the program. A price cap thus poses an unacceptable risk that the required environmental gains will not materialize, or will have to be achieved through even more aggressive regulatory action outside the framework of the cap-and-trade program. The lack of certainty with respect to whether or not these other regulatory actions would be necessary would itself impose costs. It would be necessary to develop and plan for these contingency emission reductions, especially since the timing and quantity of the necessary reductions would be uncertain. It is hard to imagine what sort of

emergency emission reductions could be held in reserve and activated quickly and only if necessary. The people of California want and deserve a program that will, with a high degree of confidence, achieve the global warming pollution reductions called for in AB 32.

A price cap would dampen the incentive for innovation that the program creates
In effect a price cap would limit returns to investment in development and deployment of global warming solutions, and this would reduce the incentive to innovate.

Prior cap-and-trade programs have functioned well without price caps

Other cap-and-trade programs have functioned successfully without such price caps. It is true that allowance prices have varied under other cap-and-trade programs, but businesses deal with price variability all the time. Variation in allowance prices will result in smaller changes in production costs than those associated with large swings in prices of oil and gas that occur periodically. Also, it is quite likely that futures options and other hedging instruments will be developed for those industries wishing to insure against allowance price volatility.

A price cap would makes linkage to other programs much more difficult.

Direct linkage to another program means that their safety valve becomes your safety valve, or vice versa, your safety valve becomes theirs.³ Adding this layer of complexity to negotiations over linkage would make reaching agreement all that much more difficult to achieve. The European Union (EU) has already expressed concerns about the safety valve proposal incorporated in Senator Bingaman's draft national legislation, as it raises the prospect of millions of U.S. "hot air" allowances, not representing real emissions reductions, being used to comply with the EU's Emission Trading System requirements; this would not only undercut the environmental integrity of the EU regime, but could raise real issues of EU compliance with its Kyoto Protocol commitments.

Conclusion

In these concluding remarks, we start by reiterating some of the themes expressed in our previous comments to the Committee.

AB 32 includes provisions that a cap-and-trade program should neither worsen air quality nor cause regressive economic effects. We emphasize the importance of a robust analysis of the distribution of impacts – both environmental and economic – as a basis for implementing these provisions. As mentioned in the introduction, we continue to explore ways to ensure that anti-backsliding provisions on air quality are respected. We intend to offer some ideas in

³ A direct link between cap-and-trade programs means that entities in "program A" can buy or sell allowances in "program B," and likewise in reverse. Suppose that A has a price cap. If the price were to rise above the level of the price cap in B, entities in B would simply buy allowances in A since the price would be lower. Thus, in effect, program B inherits the price cap that program A chooses.

this regard soon. We are also intent on seeing that unfair economic impacts do not materialize; auction revenue could well prove useful in counteracting potentially regressive economic impacts.

Another crucial point: 2020 is not the destination, it is but an interim objective in a much longer journey, and innovation will provide the new technologies needed to meet our long-term goals, namely the Governor's 2050 target. Innovation will not only provide new, low cost options, but will also enable California to compete in the rapidly expanding global market for clean technology. California is already doing well in terms of clean tech investment and is well positioned for further growth, but attention to incentives for innovation in climate policy will reinforce this trend.

One theme that we have not yet touched on is the importance of institutional design to ensure the environmental integrity of the program. This is especially important for emission reductions from offsets, but is true for cap-and-trade as a whole as well. Design of institutions should give attention to issues of delegation of authority, monitoring, penalties, and enforcement. Fines for noncompliance must be set so that failure to comply is never a rational economic strategy. Covered sources should be held responsible for the cost of continuous emission monitoring equipment, and ensuring that it is operational. If monitoring equipment fails, the source is assumed to be emitting the maximum possible amount during the time period in which equipment is not operational. Public access to emission and trading data must be a central aspect of institutional design. To increase confidence that emission reductions will actually be realized, we support inclusion of provisions for citizen suits should enforcement be inadequate.

We offer these comments as part of our larger effort to contribute to environmentally effective, equitable, and economically efficient implementation of AB 32. We believe that California can be a leader in demonstrating that economic growth and environmental protection need not be mutually exclusive. The challenges are significant; nonetheless we remain optimistic that California will succeed if market mechanisms are carefully constructed. California's successful implementation of AB32 will further national and international efforts to implement global warming solutions. A less than successful outcome could set back the broader effort to address the global warming challenge.

We appreciate very much the Committee taking these comments into consideration.

Sincerely,

Chris Busch, Ph.D. Economist, California Climate Program CC: Linda Adams, Secretary for Environmental Protection
Dan Skopec, Undersecretary, Cal EPA
Anne Baker, Deputy Secretary, Cal EPA
Eileen Tutt, Assistant Secretary, Cal EPA
Dr. Robert Sawyer, Chairman, CARB
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